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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/552,548

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Alain Straboni

BEAUMONT-27

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EXAMINER

SMITH, BRADLEY

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/552,548	<b>Applicant(s)</b> STRABONI, ALAIN	
	<b>Examiner</b> Bradley K. Smith	<b>Art Unit</b> 2894	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 and 9 is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 7 and 10 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/10/06</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of group I (claims 1-9) in the reply filed on 9/18/09 is acknowledged. The traversal is on the ground(s) that the examiner should not have contested the lack of unity, because the unity of the present invention was not contested during the international phase by the international examiner. This is not found persuasive because MPEP 1850 section I states

Therefore, when the Office considers international applications as an International Searching Authority, as an International Preliminary Examining Authority, ***and during the national stage*** as a Designated or Elected Office under 35 U.S.C. 371, PCT Rule 13.1 and 13.2 will be followed when considering unity of invention of claims of different categories without regard to the practice in national applications filed under 35 U.S.C. 111. No change was made in restriction practice in United States national applications filed under 35 U.S.C. 111 outside the PCT. (emphasis added).

Nothing in the MPEP states that the national stage examiner must follow the decision of the International searching authority with regards to lack of unity.

The examiner has restricted the claims under lack of unity under rules 13.1 and 13.2, not US Patent laws as the applicant has alleged.

Futhermore 37 CFR 1.499 discloses:

If the examiner find that a national stage application lacks unity of invention under § 1.475, the examiner may in an Office action require the

applicant in the response to that action to elect the invention to which the claims shall be restricted. Such requirement may be made before any action on the merits but may be made at any time before the final action at the discretion of the examiner.

Lastly all of the rules stated by the applicant's representative merely disclose that the international rules for lack of unity must be applied. Once again nothing states national stage examiner must follow the decision of the International searching authority with regards to lack of unity.

**Examiners Note:** Chen (US 2009/0068465) disclose both inventions therefore the restriction has been withdrawn.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Hariharan et al. (US 2007/0014682). Regarding claim 1, Hariharan et al. disclose forming a semiconductor material from powders comprising at least one component belonging to the group formed by the elements of column IV of the Mendeleiev table and their alloys, characterized in that it comprises a step of compression of said powders and a thermal processing step such that part at least of the powders is melted or made viscous (fig. 1). Regarding claim 3, Hariharan et al.

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disclose powders belonging to a specific area are melted. (The examiner understands that the whole area could be interpreted as a specific area).

Claims 1-3, 6, 7, 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al. (US 2009/0068465). Regarding claims 1, Chen discloses forming a semiconductor material from powders comprising at least one component belonging to the group formed by the elements of column IV of the Mendeleiev table and their alloys, said method comprising a step of compression of said powders and a thermal processing step [0071] such that part at least of the powders is melted or made viscous. Regarding claim 2, Chen discloses the compression and thermal processing steps are simultaneous [0071]. Regarding claim 3, Chen discloses powders belonging to a specific area are melted. ( The examiner understands that the whole area could be interpreted as a specific area). Regarding claim 6, Chen discloses the compression step is preceded by a step consisting of placing powders on a plate (surface of piston) the powders have a different nature (one is Si and the other is Ge) [0070-0071] (fig. 10). Regarding claim 7, Chen discloses the powders are pressed by the pistons (the pistons inherently are capable of texturizing a surface of a material) [0070-0071] (fig. 10). Regarding claim 10, Chen discloses a semiconductor material with aggregates exhibiting energy gaps of different value (fig. 2a).

***Allowable Subject Matter***

Claims 8 and 9 are allowed.

Claims 4-5, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to teach or suggest the powders comprise silicon powders and powders of at least another component, the thermal processing being such that the silicon is not melted and that at least one of the other components is melted or made viscous (claim 4) the powders comprise doped semiconductor powders and undoped semiconductor powders, the thermal processing being such that only the doped powders are melted (claim 5) a semiconductor obtained at least partially by compression and thermal processing of powders comprising at least two distinct areas formed of distinct components belonging to the group formed by the elements of column IV of the Mendeleiev table and the alloys thereof.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley K. Smith whose telephone number is 571-272-1884. The examiner can normally be reached on 10-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Nguyen can be reached on 571-272-2402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bradley K Smith/  
Primary Examiner, Art Unit 2894